INDEX TO VOLUME I.

ARTICLES. PAGE.

Crude Petroleum for Fuel. By GEO. H. LARKIN 97
Electricity on Plant Growth and Light in Chemical Decomposition. By LIEUT. W. STUART-SMITH, U.S.N. (*Illustrated*) 73
Electricity on the Cruiser Olympia. By W. W. HANSCOM (*Illustrated*) 124
Night Photography by the Electric Light. By JOSEPH F. MULLANDER AND SIDNEY SPROUT (*Illustrated*)..... 83
On the Field of Operations of an Electrical Engineer. By E. J. MOLERA..... 19
Photography by Glow Lamp Illumination. By W. LODIAN (*Illustrated*) 143
Resonance in Boiler Explosions. By LIEUT. W. STUART-SMITH, U. S. N.....115
The Efficiencies of Electric Plants. By SIDNEY SPROUT (*Illustrated*)..... 18

EDITORIAL.

Air Transmission at High Pressures.....144
A Plea for Motormen.....144
Air Transmission at High Pressures.....144
A Vital Issue..... 40
An Idea for Bicycle Builders 92
An Inaccurate Estimate of Power Transmission.....118
An Opportunity Lost..... 70
Competition in the Telegraph 117
Concerning Journalistic Venerableness..... 17
Concerning the New Sacramento 92
Electrical Engineering on the Pacific Coast..... 16
Electricity in Office Practice 144
Electric Traction for Country Roads 93
Electric versus "Coal Car" Transmission.....117
Let Actions Speak..... 16
Light Haulage by Means of Electric Motors.....118
National School of Electricity..... 94
On Central Station Economy..... 72
Power Transmission by Compressed Air..... 93
Power Transmissions of the Future..... 40
Read Your Fire Insurance Policies..... 41
Schools for Engineering Education 145
The Far West Recognized.....117
The Newer Sacramento 70
The Opportunities of Electro-Chemical Engineering..... 71
"What's in a Name?"..... 70

EDUCATIONAL.

Electrical Engineering at the Leland Stanford Jr. University 15
Electrical Engineering at the University of California 15
The National School of Electricity..... 15

ELECTRICITY IN MINING.

Electro-Chlorination..... 26
Production of Pure Zinc.....137
The Electrolysis of Ores.....122
The Magnetic Separation of Free Gold—A Suggestion. By LIEUT. W. STUART-SMITH, U. S. N 89

ELECTRIC RAILWAYS.

Air Brakes on the Haywards Line (*Illustrated*).....142
A Lift Bridge on the Chicago Electric Elevated..... 39
Steep Gradients on Electric Roads. By LIEUT. W. STUART-SMITH, U. S. N. (*Illustrated*)..... 31
The Denver Consolidated Tramway Company (*Illustrated*).. 44
The Haywards Electric Locomotive (*Illustrated*)..... 69

ELECTRO-INSURANCE. PAGE.

A Seattle Electric Station Burned (*Illustrated*)..... 25
Electrical Inspection is No More..... 25
Electricity as a Fire Hazard..... 18
Lighting from Trolley Circuits 26
Meeting of the Electric Committee of the U. N. E. A.....148
Metallic Sodium Precipitated by Electric Leakage..... 47
Meeting of the Electric Committee of the U. N. E. A.....148
The Influence of Heat on Carrying Capacity..... 91
The Lessons of a Fire 46
To Revise Insurance Rules..... 91

HISTORICAL.

Statistical Electricity in History 35
The Columbia's Plant Dismantled (*Illustrated*)..... 22

HYDRAULICS.

Centrifugal Pumps and Hydraulic Principles. By L. M. HOSKINS 113
The Pelton Water Wheel (*Illustrated*)..... 76

LITERATURE.

A Manual of Telephony. By PREECE & STUBBS 17
Electrical Engineering Leaflets. By HOUSTON & KENNELLY..120
Electrical Transmission of Energy. By A. V. ABBOTT.....121
Electric Measurements. By H. S. CARHART and G. W. PATTERSON, Jr..... 96
"Facts" and "High Pressure" By BABCOCK & WILCOX ... 96
In the Development and Transmission of Power. By WM. CATHORNE UNWIN, F. R. S..... 42
Special Agents' Electrical Hand Book. By A. M. SCHOEN.. 43
The Electric Current, How Produced and How Used. By R. MULLINEUX WALMSLEY 17
The Law of Incorporated Companies. By FOOTE & EVERETT 42
The Practical Management of Dynamos and Motors. By F. B. CROCKER 73
Transmission Lines. By A. V. ABBOTT..... 42

MISCELLANY.

A Commercial Success from a Municipal Failure (*Illustrated*) 90
A Departure in Electric Elevator Construction (*Illustrated*)..100
Electricity in Plant Growth. 99
Electricity vs. Sound in a Foot Race..... 78
Electric Light Cheaper than Candles..... 39
Mules for Passengers.....116
Novel Fly-wheel Constructiou.....136
Personals 47
Personals 66
Personals 124
Recent Siemens-Halsky Installations.....137
Scientifically Cut Lamp Globes..... 27
Some Tests of Bicycle Lanterns. By F. E. SMITH (*Illustrated*) 98
The Capital Gas Company (*Illustrated*)..... 64
The Electric Carnival (*Illustrated*) 67
The Pacific Coast Gas Association..... 43
The Science of Good Light..... 78
Tobogganing Outdone.....102
Van Leer Eastland—In Memoriam..... 47

PASSING COMMENT.

An Editorial Review of Current Events and the Publications of Our Contemporaries..... 95-119-146

71272

PNEUMATICS. PAGE.

An Economical Air Plant now Being Installed by the North Star Mine. By EDWARD A. RIX, P. E. (*Illustrated*) 110
Some Tests of Air Compressors. By A. E. CHODZKE, M. E. (*Illustrated*) 131

POWER TRANSMISSION.

A General Electric Single-Phase Power Transmission Plant (*Illustrated*)..... 36
Electric Power Transmission, Actual and Prospective..... 45
Niagara's Wonderful Plant 38
Features of the Portland Transmission Hitherto Unpublished. By GEO. P. LOW (*Illustrated*) 138
The Folsom-Sacramento Power Transmission (*Illustrated*).. 55
The Nevada County Power Transmission (*Illustrated*)..... 107
The Sacramento Electric Power & Light Co. (*Illustrated*)...123

REPORTS OF THE MONTH.

Communication 28-50-80-105-127-154
Illumination.....30-50 80-105-128-156
Incorporation 154
Litigation.....50-80-105-127
Miscellaneous 28-54-82-126-154
Transmission.....29-53-82-105-128-155
Transportation.....29-52-81-106-127-154

TELEPHONY.

Dispensing with Magnetos in Telephone Exchanges (*Illustrated*)..... 90

PAGE.

Modern Telephone Exchange Systems. By GEO. P. LOW (*Illustrated*) 1

THE LAY PRESS. 27-49-104-126-152

Popular Reflections of the Conditions and Prospects of Electrical Engineering on the Pacific Coast.

THE TRADE.

Abner Doble Co.....150
A Departure in Fusing Transformers (*Illustrated*)..... 48
A New Idea in Tape 103
A New Railway Supply House. 79
A Tower of Light (*Illustrated*)..... 79
An Enormous Illuminated Sign (*Illustrated*)..... 79
Echoes of the Carnival.....102
Handling a Heavy Cable (*Illustrated*) 125
John M. Klein's Electrical Works.....102
J. W. Brooks & Co. (*Illustrated*) 151
Lundell Dynamos for Gas Engine Service (*Illustrated*).....125
New Westinghouse Offices..... 125
Special Reversible Mill Motors (*Illustrated*).....124
The Chicago Rail Bond (*Illustrated*)..... 26
The Lundell Exhaust Fan (*Illustrated*)..... 48
The Walker Street Railway Motor (*Illustrated*) 103
Tie Plates on Electric Railways (*Illustrated*).....125
Too Good to Suppress..... 48
Wiring Extraordinary 79
Wrought Steel Boiler Construction.....103